

# Wildlife Express

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## WESTERN TOAD

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inside

**Nature's transformers.**  
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**Do toads have cold blood?**  
**What is herping?**



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**Western toads are found all across Idaho from mountain meadows to brushy deserts. They spend most of their time on land but need to be near water to lay their eggs.**

# Western Toad

Western toads are big; they may be up to five inches in length. Their bodies are covered with a mixture of tan, gray, green, brown or black colors. Although each toad may have its own special blend of colors, there is one thing they all have in common. They all have a cream-colored line running down their backs from their heads to their tails.

Their skin is bumpy and covered with poison glands for protection. Western toads taste awful to most predators! Since western toads taste yucky, they are preyed upon by animals that don't have a lot of taste buds. Birds, like ravens and crows, eat quite a few adult western toads.

One of the sounds of spring is the chorus of male frogs and toads calling to attract mates. Western toads are not part of this chorus. They do not have a mating call.

Females lay about 12,000 eggs in a double-stranded string. This string may be up to six feet long! The eggs are laid in shallow areas of ponds, lakes or slow-moving streams. Very dark tadpoles hatch from the eggs. Tadpoles

are often seen swimming in large swarms. It is hard to miss hundreds or thousands of tadpoles swimming along the shore of a pond or lake!



Western toads seek shelter in burrows or under rocks or logs. They dig burrows in loose soil or use the burrows of small mammals. Toads need to avoid the cold of winter and escape the heat in summer. During hot summer days, they stay safe in the burrow and come out at night to eat insects, spiders, roly-polies and earthworms. During the cooler months of fall and spring, they are active during the day.

In some places, western toads are becoming harder to find. In Idaho, they are considered rare and at risk. There are many things that make them vulnerable to extinction. Scientists do not know all the threats that western toads face. Changing habitats, predators, disease and parasites may all contribute to their decline. Scientists are working for the conservation of western toads, so they will always remain part of Idaho.





# AMAZING Amphibians!

Have you ever caught a toad?  
If you have, you've held an amphibian.  
Frogs and salamanders are amphibians, too.

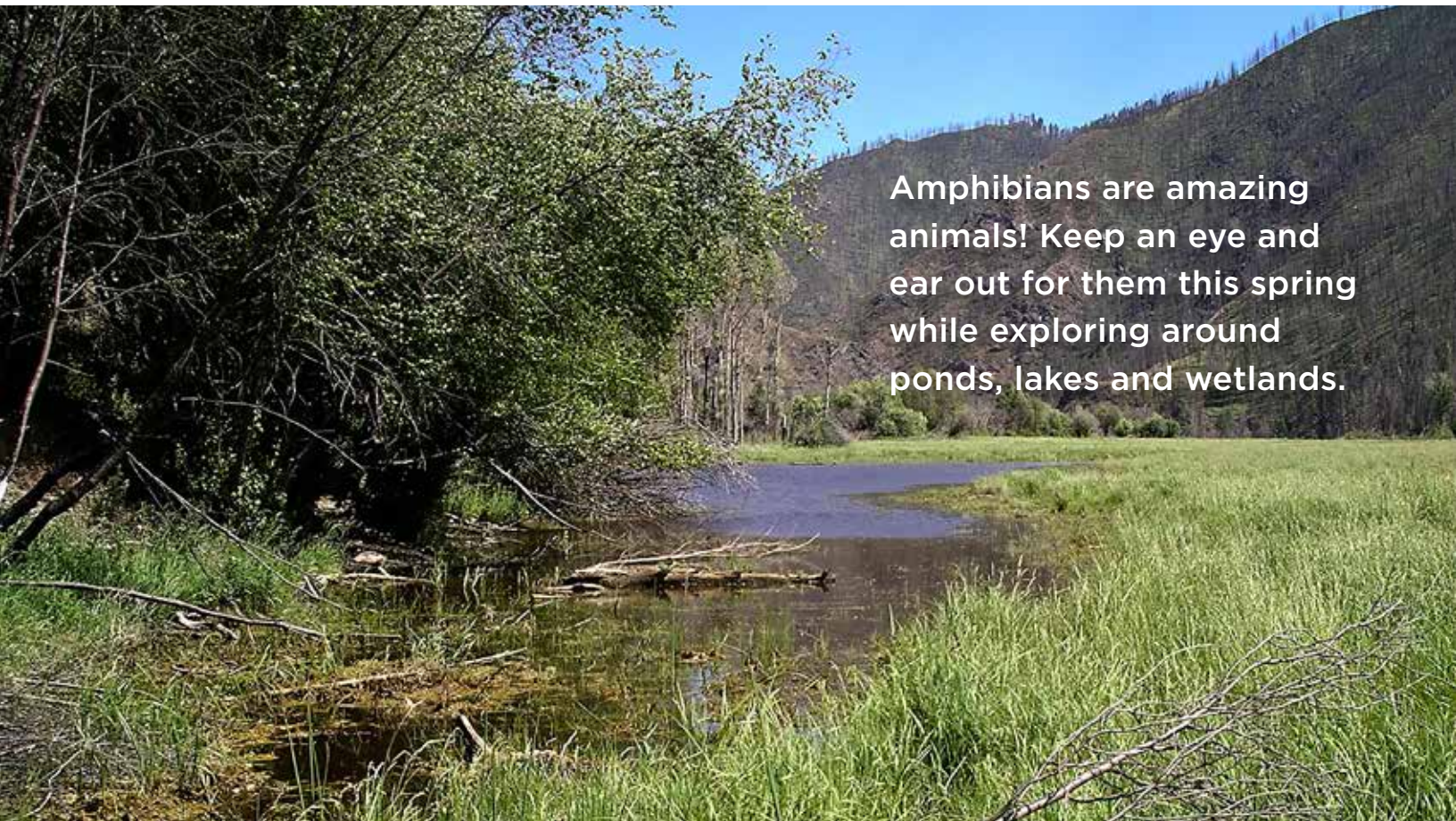
Amphibians are split into three groups. The first are caecilians (si-SIL-yens). They are leg-less and look like worms. Idaho doesn't have any caecilians. Salamanders and newts are the next group. Four salamanders and one newt live in Idaho. The last group is frogs and toads. Ten different frogs and toads live in Idaho.

All frogs and toads share things in common with each other. Most are usually found in or around water. All amphibians lay their eggs in wet places. Their eggs are not covered with hard shells. The eggs are covered with layers of jelly. The jelly needs to stay wet, so the developing amphibian in the egg can breathe. If the jelly dries out, air can't flow in and out of the egg. If this happens, the amphibian will die.

Adult frogs and toads spend time on land as well as in the water. Frogs do not only breathe with lungs; they can also breathe through their skin! Their moist, thin skin lets oxygen and other gasses pass right through. About once a week, frogs shed their skin. They pull the skin over their heads like a sweater and usually eat it. It may sound gross to eat the skin, but it has nutrients that the frog needs.

Most adult frogs eat things like insects, spiders and worms. Larger frogs will eat just about anything that is alive that they can fit in their mouths, including other frogs! Frogs and toads swallow their prey whole, and their eyes help them! The eyes sink down through openings in the skull and help push food down the throat. This is why frogs and toads seem to blink as they eat.

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**Amphibians are amazing animals! Keep an eye and ear out for them this spring while exploring around ponds, lakes and wetlands.**





# Nature's Transformers

Do you have a toy called a transformer? It can be a lot of fun to play with transformers. It is like having two toys in one. A robot might turn into an airplane or truck. Nature has transformers, too.

Can you think of an animal that changes the shape of its body as it grows? Butterflies may come to mind. Their bodies change shape and form as they get older. They go through a metamorphosis (met-a-MOR-fo-sis).

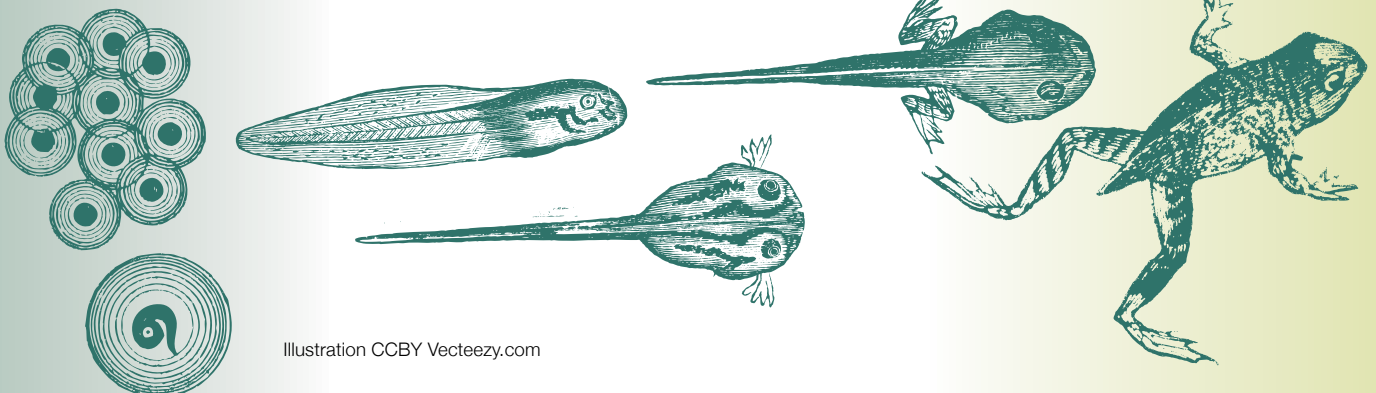
You may be thinking, "Doesn't everything change as it grows?" Everything does change a bit as it grows and develops. During a metamorphosis though, changes happen quickly and are dramatic. Think of a butterfly. It changes from a fuzzy, crawling insect that chews its food to a beautiful, flying insect that drinks its food. What a change!

Maria Sybilla Merian was one of the first people to tell others about metamorphosis. In 1705, she published a book of her paintings showing butterflies and beetles in their different life stages. At one time, people thought that some insects just appeared out of dead and rotting plants and animals. Ms. Merian's paintings and descriptions showed the world that metamorphosis was real.

Amphibians are the only vertebrates (animals with backbones) that go through a metamorphosis. Western toads go through quite a change. They lay their eggs in water, and the eggs hatch into tadpoles. Tadpoles get oxygen out of the water with gills. Metamorphosis from tadpoles to adults depends on the temperature of the water. It may take up to six years in Idaho. The change is faster in warmer water. The first sign that the tadpole is transforming is back legs begin to appear. Then lungs begin to develop. The front legs then sprout and the tail begins to shrink. The last things to disappear are the gills. These small toads are called toadlets. They still have a bit of growing to do before they are considered adults.

Many scientists think that metamorphosis happens so that each life stage lives in a different habitat. That way the young and adults do not have to compete with each other for food. Chemicals, called hormones, trigger the changes. At each stage, certain hormones control how the animal grows.

Metamorphosis is amazing to see. If you find a cocoon, leave it outside, but look at it every day. You may be able to see the insect changing and developing inside. It is fun to see what will emerge!





# Clever DEFENSES

Can you think of an animal that has a clever way of protecting itself? Animals may use color, armor, or even poison to protect themselves.

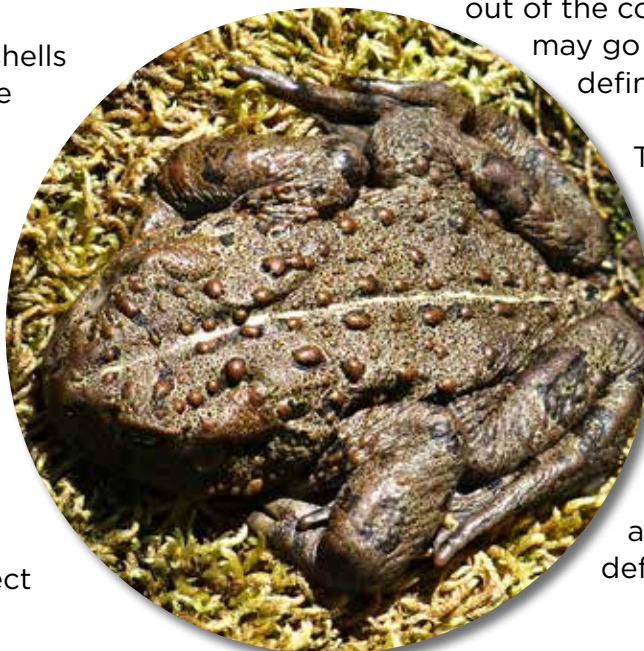
Western toads have a few clever defenses. The colors on their bodies help them to camouflage (KAM-uh-flazh) or hide against the ground. Poison is also a good defense! Sometimes an animal might not look dangerous. Many toads, frogs and salamanders have glands on them that make poison. If they aren't poisonous, they may taste awful. Poisonous animals are sometimes bright and colorful. Their bright colors are a warning to stay away.

Turtles use armor. Turtle shells are made of bone, and the outside is covered with scales called scutes. Scutes are made of the same thing as your fingernails, something called keratin. Keratin is hard and tough and helps to protect the shell from weather. The patterns and colors on the scutes also help camouflage the turtle. If camouflage doesn't protect

the turtle, it can seek protection inside its shell. Turtles' necks are very flexible, and the skin around the neck is loose. This allows the turtle to pull its whole neck inside the shell when danger is near. Most turtles fold their necks in an "S" shape inside the shell. It is very difficult for a predator to get a turtle out of its shell.

Some lizards also have armor. Horned lizards come to mind. They are covered by sharp, pointy scales. Horned lizards have another way to protect themselves. They can squirt blood out of the corner of their eyes! The blood may go as far as three feet. This definitely will startle a predator!

Think of a skunk. Boy, do they smell bad! Their stripes are a warning to stay away. Once an animal has had a run-in with a skunk, it most likely won't get too close to a skunk again. Can you think of other clever ways animals protect themselves? There are just about as many clever defenses as there are animals.







# Do toads really have cold blood?

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If you hear an animal is cold-blooded, does that mean the animal's blood is actually cold? Well, not really. It means they are the same temperature as their surroundings. If a western toad lives in a burrow and the air in the burrow is 50 degrees, the toad will also be 50 degrees. Snakes, lizards, turtles, insects, fish and frogs are cold-blooded animals.

Some people call cold-blooded animals ectothermic (ek-to-THER-mik) animals. Ecto means outside, and therm means heat. Ectothermic animals get heat from outside their bodies. You may also hear people call them poikilotherms (poy-KEE-lo-therms). This is just a fancy word for a cold-blooded animal.

Cold-blooded animals are most active in warm weather. Cold weather slows down their muscles. That's why many cold-blooded animals lay or bask in the sun. The sun helps to warm them up. If they get too warm,

they need to move to a shady spot or go in a burrow. Colder weather can kill cold-blooded animals. They need to migrate to warmer places or move underground. Some cold-blooded animals, like bees and dragonflies, shiver to stay warm.

Cold-blooded animals have a real advantage in deserts. Deserts are warmer, and food is often harder to find. Cold-blooded animals don't need to eat as much as warm-blooded animals. Sometimes they can go months between meals. This is why you often see more cold-blooded animals living in deserts than warm-blooded animals.



Calling an animal cold-blooded may be a bit confusing. Next time you are talking about a cold-blooded animal, how about calling it an ectothermic animal or a poikilotherm? You may teach others a new word and teach them the true meaning of the term "cold-blooded."



# Whoa, Mama!

**Some mothers really have their work cut out for them. Western toads lay up to 12,000 eggs. Other animals, like black bears, have one or two young at a time. Which mother has the hardest job? Why is there such a difference?**

The animal's life style, life span and the number of animals that eat it all come into play. Usually, animals that have large numbers of babies or lay many eggs at one time are prey animals. They are eaten by many different creatures. Often they do not care for their young. This is the case with most frogs. Western toads do not take care of their young. Once the female lays her eggs, she leaves. She is not there to protect her eggs and tadpoles or show them where to find food. Do you think animals like to eat frog

eggs and tadpoles? You bet! Many will be eaten by other animals. Nature has given western toads the ability to lay thousands of eggs. Hopefully, some toads will survive to lay eggs themselves and make sure the species survives.

Animals that have fewer young usually invest a lot of energy and time caring for their babies. When bear cubs are born, they are tiny. They are about the size of a pop can and weigh less than one pound! Bear cubs are totally dependent on their mothers for many months and are at least one and one-half years old before their mothers stop offering care and protection. Imagine if she had to care for 12,000 cubs! The mother would not have the time, energy or food to care for that many babies.

The western toad lays thousands of eggs and leaves. It has no guarantees that any of its young will survive. The black bear has two cubs and spends a lot of time and energy caring for them. The cubs have a better chance of surviving. Which mother has a more difficult job? Which mother would you rather be?





# Do Toads Make Good Pets?

Toads are such interesting animals. Many people would like to keep them as pets, but keeping these animals as pets may cause problems.

Animals have specially adapted bodies to live in their unique habitats. It is hard to recreate an ecosystem in a cage. Toads are sensitive animals. It is important that they have the proper temperature and humidity to be healthy. The smallest change in their habitat can have life threatening effects. There's no change greater than being taken from the wild and put in a cage!

Idaho has rules about capturing and keeping amphibians and reptiles. Check with Idaho Fish and Game to understand the rules before your family decides to capture or keep one

of these wild animals as a pet. You wouldn't want to break the law.

The place for Idaho's wild animals is in the wild. This will help ensure Idaho has healthy wildlife for years to come.





# Go Herping!

Have you ever heard of herpetology? In Greek, herp means creeping, so herpetology is the study of creeping things. It is the study of reptiles and amphibians. Many people just call them herps for short.

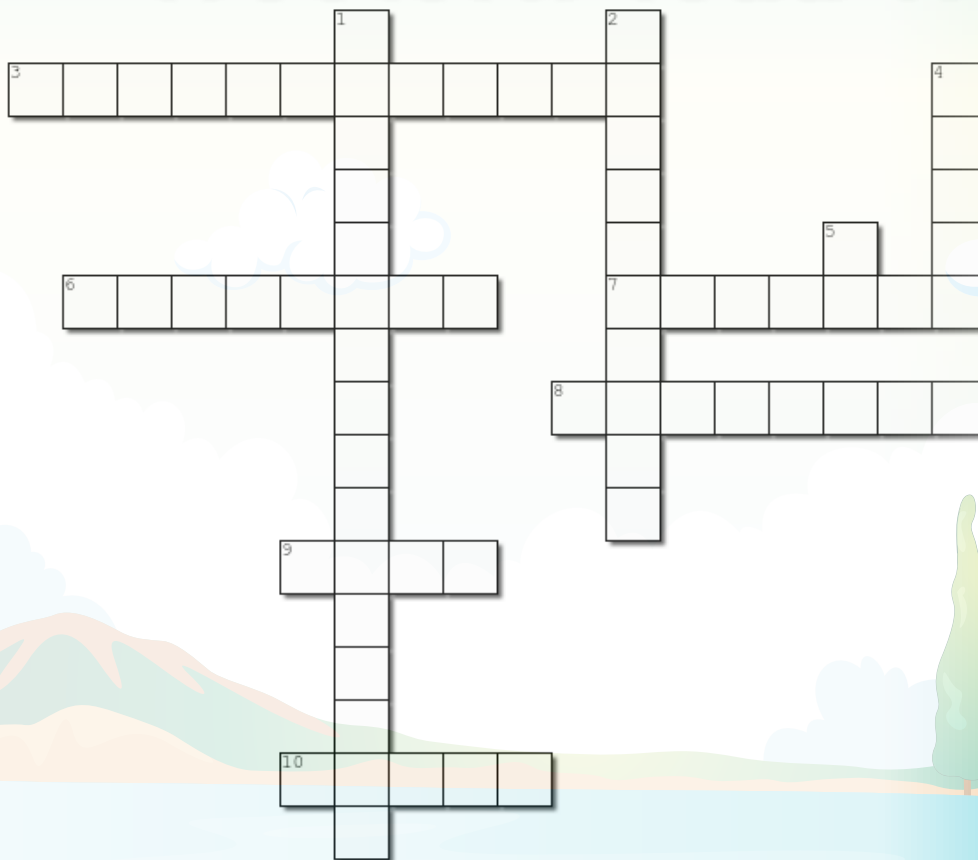
It is fun to look for amphibians and reptiles and learn about what they need to survive. If you want to go “herping” and look for reptiles or amphibians, here are some things to keep in mind. You are more likely to see an amphibian or reptile in the spring during breeding seasons. Use a good sturdy stick to flip things over. Many herps hide under rocks, logs and leaves, so looking under things is a good place to start. Look for amphibians when the sun is going down and at night; reptiles are usually seen during the day.

Herpetology can be fun! Read books and watch videos to learn more about amphibians and reptiles. Then go exploring and look for herps around your neighborhood.





# Western Toad Words



Created using the Crossword Maker on TheTeachersCorner.net

tadpoles bumps jelly amphibians poikilotherm doubled-stranded no crow  
burrows toadlets

## Across

3. Another word for a cold-blooded animal.
6. Small, immature toads.
7. Western toads seek shelter in these.
8. These are often seen swimming in large swarms.
9. A bird that preys on western toads.
10. Amphibian eggs are covered in layers of this.

## Down

1. Eggs are laid in a \_\_\_\_\_ string.
2. The only vertebrates to go through a metamorphosis.
4. Western toad skin is covered in these.
5. Do western toads have a mating call?



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# Wildlife Express

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## WE WOULD LIKE TO HEAR FROM YOU!

If you have a letter, poem or question for Wildlife Express, it may be included in a future issue! Send it to:

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